

2. GENERAL LITERATURE.

The Descent of Man—in connexion with the hypothesis of Development.—A Lecture delivered at the Dalhousie Institute, Calcutta, July 28, 1871, by John H. Pratt, M.A., F.R.S., Archdeacon of Calcutta.

THE evolutionary hypothesis has taken another gigantic leap out of Mr. Darwin's fertile brain, and on every side we may see already that it will be met with far less welcome than his first and more departmental proposition. And no wonder, for he has boldly abandoned the position of a zoologist, and has entered, and in one rapid tour undertaken to occupy, the whole vast field of man's intelligent nature.

It requires no small effort of self-control to look dispassionately at an hypothesis which derives our bodies from a monkey. But so strong is the present feeling of civilized men that flesh and blood are not the permanent part of ourselves, that what is supported by the flesh of animals may also have been derived from it, that there is not the sense of incongruity about the suggestion which startles us in Mr. Darwin's later views. We have been accustomed from childhood to look upwards as high as to God, as our Creator; and yet to look downwards at the very dust under our feet as that out of which we were made. In maturer years we learn by the study of God's works without us and within us, to bow to the lessons of infancy, and to acknow-

ledge His power; while experience and the sight of death convince us that that power is great enough to have made even our sentient bodies out of the senseless earth upon which we tread. Thus our daily thoughts familiarize us with the two extreme elements of our origin. Upwards we trace our design to the highest conception of our thoughts; downwards there is nothing that is called matter too low to furnish our substance.

With such habitual consent both to the dignity and to the humility of our physical nature, we feel it strange indeed to be told that we may gain in nobility of mind if, omitting the act of the Creator, we trace the wondrous series of our descent, through the several forms of animal existence, to Chaos at the temperature of incandescent hydrogen, according to the school which Professor Tyndall represents; to a boiled liquid under a vacuum, as Dr. Bastian will have it; to the organic germ which Professor Huxley places at the furthest conceivable end of the series; to the mossy growth on the surface of a stray meteor which thus brought life into this world of ours, as Sir William Thomson has half suggested; or, lastly, to some one of a very few, and what are called very low, forms of the animal kingdom, as Mr. Darwin declares.

It is not that any of these theories are too base for us that we turn from them, but because of their inadequacy to satisfy that nobility of mind of which we are already conscious in the all-sufficient thought of a sustaining Father. We are ready to go with science wherever science may lead us, provided we have God to guide us both. But it is not enough to say, with Mr. Darwin, that the existence of a Creator is an acknowledged fact, attested by the highest intellects that have lived. We cannot do obeisance in this way, and then rush forth, and besmear ourselves in abasement like swine. There is no nobility in this. The purity to which all things are pure is that which sees God *always*; which accepts the daily meat on the table, not as the breeder's and the butcher's work alone, but as the food given to us, as the fowls of the air are fed, by Him who also clothes the lilies of the field in glory. Sir William Thomson, to whom we owe some apology for introducing his quaint suggestion in the above connexion, but to whose high place in science few need be ashamed to do submission, has well expressed the feeling in terms more cautiously adapted to the scientific body he was addressing, but in spirit entirely one with the more biblical phrases we have used. In his last address to the British Association he closed his review of modern science with the consideration of its bearing on man; and said, "I have always felt that this hypothesis (of natural selection) does not contain the true theory of evolution, if evolution there be in biology. Sir John Herschel

“in expressing a favourable judgment on the hypothesis of a zoological evolution, with some reservation however in respect to the origin of man, objected to the doctrine of natural selection that it was too like the Laputan method of making books, that it did not sufficiently take into account a continually guiding and controlling intelligence. This seems to me a most valuable and instructive criticism.” “The proofs,” he goes on to say, come back upon us with irresistible force, showing us, through all nature, the influence of a Free Will, and teaching us that all living beings depend on one *ever acting* Creator and Ruler.”

This is but the last expression of the sense of that creative care which was declared by Moses, proved by Christ, and reverently accepted by Newton.

With such authority as that above quoted both for and against the Hypothesis of Evolution, and with a strong assent to the imperious need of recognizing the momentary agency of God's will, if we are to save our reason from insauity when we reach the limits of inductive knowledge, we proceed to Archdeacon Pratt's criticism upon Mr. Darwin's last propositions.

But the field is larger than we have yet considered, and we have not given so much time to the subject as the veterans whose conflict we are watching from a distance. We do not on that account waive our right of private judgment, or the right of expressing it. A few broad features are, after all, the result offered to our inspection; and from our more vulgar point of view they form only details in the larger landscape on which our eyes habitually rest, and on which we ponder, as a whole, perhaps not less deeply than the concentrated philosopher on his own pet study.

The lecturer at the Dalhousie Institute shows little mercy to his subject. For reasons which we have given above, we feel that he is entitled to be strict. Mr. Darwin shows, with a patience and a genius never excelled in the mastery of an infinitude of facts, that the intricacy of resemblance between the physical constitution of man and that of animal after animal in the descending line of the Past is significantly close. But we have many high authorities, whose opinions Mr. Darwin cannot set aside, though he thinks that too much is made of them, that alongside of all these resemblances there is as strong an intricacy of differences; and that in the case of man these differences are nothing less than glaring. Mr. Darwin's theory is based upon the strong suggestion which the resemblances offer that there is a line of absolute continuity running from end to end, as the sap from the root to the leaf, as the strand from knot to knot of a mesh. The Archdeacon insists on the absence of all evidence of continuity. And there seems no answer but a prayer *ad misericordiam*. We are not speaking of the admitted gaps between the species of one stratum and those of

another. The difficulty with which Mr. Darwin has to deal is that in strata, which speak for themselves of æons of *continuity* of action, there exists no evidence of *modification* of species. New species occur, showing that there is a need for explanation; but their differences from earlier species are sensible; whereas the theory is that the change from species to species is by insensible degrees. We find one species after another rise up like the links of a cable out of a deep sea; but each link is a thing in itself. The metaphor of a link is the very language of Mr. Darwin himself, and it well represents the flaw in his theory. The continuity of the chain, as a chain, seems irresistibly established. The presence of each link at the time and place where it is found, is accounted for, in one sense, by the link before it. But that the one owes its existence to the other is a statement without evidence in the analogy of Nature. On the contrary, the idea of creation is strongly suggested to those who see no *à priori* difficulty in such an explanation. Mr. Darwin does see such a difficulty. He expressly forbids any suggestion of occasional acts of creation. He asks us rather to be patient, and he pledges his professional reputation, and the future energies of geologists and zoologists, to show that in truth it is not a chain, but a continuous strand that really lies before us. We are not averse to let the matter rest so; for it needs must; we may take it for granted that the materials for argument on his side are exhausted for the present. But let it be understood that what is offered to us is a hypothesis which is confessedly weak when a crucial instance is proposed; and that the author of it declines to avail himself of a *vera causa* the existence of which, and the agency of which he fully admits in another crucial instance.

But though Mr. Darwin's postulate, that of all the organisms that have ever existed only one or two are due to the *vera causa* of a Creator's will, cuts off all possibility of his accepting the view which, on the rest of his own teaching we would be willing to adopt, that can be no reason why it should cut us off. Unable as we are to see solidity in his own explanation, he nevertheless gives us a vivid picture of the solemn procession of facts. To the single eye of Reason the scene, though drawn in admirable perspective, strikes us as flat and artificial. Is it wholly unreasonable to call in the eye of Faith, to draw therewith another picture of the same subject from another point, and endeavour thus to take a stereoscopic view of the truth? Granting that the birth-days of this vast family fit so marvellously with the progressive character of the individuals compared to each other as to suggest derivation, and that there are, in company with adverse indications, some which do support the suggestion, in the habits of organic matter, will the introduction of a guiding Mind suffice to give firmness to what is at present

but a shrewd guess? Where the intervals between the species are small, may we assume that the advance of the general plan was intentionally slow? Where, as in the case of man, the interval is glaringly abnormal compared to other intervals, may we assume that a stage had been reached when a fiat of greater moment went forth, and organic matter, never swerving from its rigid laws, obeyed the command and stood forth a more glorious creature than had yet been seen? We offer the question in the conviction that whether man was made of flesh, like woman, or made of dust, he equally rose at the special utterance of Him who created the earth and all that therein is. We recognize the force of Mr. Darwin's closing remark to one of his chapters, that the most humble organism is something much higher than the inorganic dust under our feet. We cannot, however, wilfully close our eyes to the fact that man is a much higher thing than the most developed organism by his side; and if Mr Darwin accepts creation in the one case it is hard to see why it should not have operated in the other.

We think this may fairly be asked on the authority merely of the striking physical differences between man and other similar creatures. But the question comes with such tremendous force when we consider his moral and intellectual attributes, that we do not wonder that Archdeacon Pratt has treated the whole of this part of his subject with what we cannot help thinking unfortunate brevity.

To the gregarious habits of animals Mr. Darwin attributes the rise of the golden rule "As ye would that men should do to you, do ye to them likewise." To the crouching servility and real affection of a dog for his master, he attributes the recognition by man of the truth that there is a God. To such propositions the Archdeacon has no other remark to offer than that even in these respects there may be some resemblance. But unfortunately he does not pause to point out wherein it is that the wide difference lies which indicates the interposition of the Creator. No doubt he relied on the instinctive sense of his audience that the difference was too obvious to require specification. For ourselves we cannot be content with this. Here again we are in presence of a long, elaborately exhibited array of incontestable facts, to the bare mass of which we must bow our judgment whatever reserve we may make. The chain seems to have an existence, though we see its shadow rather than a reality as in the former case. For instance, one of the strongest distinctions of man's mind seems to be its power of perceiving an unseen God. Mr. Darwin is prepared for this, and asks how a fact which he himself observed can be explained. A dog lying on the grass sees a parasol which had been dropped open on the lawn slightly moving

under the summer breeze ; and he growls and barks whenever it stirs. It is hard to doubt that the dog believes in an unseen agent whose presence he resents. Trivial as the incident is, the inference from it cannot be set aside by saying that it is too vast. Let this one serve as a specimen, and let it be granted on the same principle that all our endowments have their counterpart in those whom we must henceforth call our fellow-creatures with a fuller meaning to the term. There still remains one broad feature for our consideration. In granting that one species might be evolved out of another, we find that the difficulty is a rapidity and suddenness of change, so great as barely to leave us faith in a real organic derivation. We grant it, however, in accordance with the golden rule of philosophy to be willing to believe everything except the impossible or the absurd. So here, but with a thousand-fold force, we are startled by the light-like rapidity of the evolution of man's mind. We have the very firmest grounds for believing that the term of man's existence on earth has been but as a day in a thousand years ; we might more truly say as a single second in the same time, and be still exaggerating the case in order to bring it within an ordinary grasp. Yet in that short instant of time an advance has been made compared to which all that went before is as the long waiting is to the birth.

In the presence of this one consideration we find our faith in a special creation of our mind as of our body strengthened sufficiently to be able to look into the stirring details which Mr. Darwin so profusely offers to our study. His hypothesis appears to us defective, because it refuses to recognize an efficient cause in explanation of phenomena which bring us into its closest presence. With the aid of such a cause there seems room for accepting, if not the very hypothesis propounded, yet one that shall stand on common ground therewith. If we differ from the venerated lecturer in any point, it is in this. We would go further than his criticisms seem to imply, and contend even now, in this our own day, for the possibility of effecting harmony between science and theology. Where either of them ventures into unfounded speculations it is not to be expected that they should agree, save for mischief. But we believe that both will greatly gain if, even in the hazardous efforts of research, they be found in company. We have noticed with the deepest joy the *rapprochement* already taking place in Europe, or rather, to her credit be it said, in England. Harmony for its own sole sake is not indeed to be aimed at, as Archdeacon Pratt most justly observes. But we believe, judging from the tone of such men as Darwin, Tyndall, and Huxley, of late, that on their side at least there has been a recognition of the need for peace. The true secret will be found, we trust, in attempts, for which there is ample room,

to discover where and how they may best support each other without doing violence to our duty to God.

Notes on Jerdon's Mammals of India. By an Indian Sportsman. Madras. 1871.

WE have always been of opinion that an Indian officer who has withstood the seductions of the staff corps, and retains a taste for literature, should meet with a favourable reception when he ventures into print. In the present case there is a further claim to consideration, for the languid interest which is usually evoked by a publication upon any branch of Indian natural history, throws a heavy expense upon the author. We gather from remarks scattered at intervals through the book, that the author of these notes is a military officer, who has seen long service in Burmah, Madras, and Central India. He is evidently an ardent sportsman, and takes considerable interest in the history and habits of the animals, to the chase of which he is devoted. He appears to be in the habit of comparing the beasts which he slays with the descriptions of them given in Jerdon's *Mammals of India*, and is not above noticing those smaller and less regarded animals which not being 'game' pass unremarked by those so-called 'sportsmen' whose noblest aspiration is a heavy bag. He does not appear to have had any scientific training, and consequently his descriptions are not always close or accurate enough for the identification of the animals of which he speaks; but he seems to have made himself acquainted with the commoner animals described by Jerdon, and is thus in a position to do good service to a more scientific naturalist by securing specimens, which otherwise might escape observation.

The book is made up of a series of odd notes and extracts evidently collected over a long period of time, and strung together without much effort at arrangement. The first part of the book gives us notes on about one-third of the mammals described by Jerdon. The notes are chiefly corroborations of Jerdon's remarks, interspersed with extracts from letters of the author's friends to himself, or to local newspapers, on sporting subjects, or fragments of papers published in the *Indian Sporting Review*. Original remarks on the habits of the animals described are to be found scattered here and there throughout the notes. The second part, or about two-fifths of the whole book, is made up of descriptions of some of the rarer Indian animals, taken bodily from Jerdon's book.

The author tells us that when he commenced his notes, he did not intend to give descriptions of the animals about which he writes, as he believed that all who cared about Indian Natural History would possess a copy of Jerdon's book, but by the advice of friends